

### Abstract

An infinitely variable speed ratio planetary ball transmission comprising planetary members in rolling contact with moveable inner and outer races and a constant speed accessory drive system utilizing the transmission. The transmission is infinitely variable between ratios of approximately 0.3 and 1.0. A transmission input shaft is connected to a prime mover such as a vehicle engine crankshaft by a drive belt. The transmission comprises at least one output shaft that is coaxial with the input shaft. An output pulley is attached to the output shaft. A belt is engaged between the output pulley and various engine accessories. A second end of the transmission output shaft may be directly coupled to an engine accessory mounted on the transmission. An included control system senses a crankshaft speed. A processor analyses the crankshaft speed and accordingly adjusts the transmission ratio using a stepper motor connected to a worm drive to maintain a constant output speed regardless of crankshaft speed.